

# Gel Stain User's Guide

Easy to apply, these stains are forgiving, even on blotch-prone woods

BY TERI MASASCHI

**W**ipe-on stains have become enormously popular in the last few years, and none more so than the gel versions. Sold as one-step, foolproof finishes that need only a rag as an applicator, gel stains appeal to that large group of woodworkers who dislike finishing. While many serious finishers spurn these stains assuming they have few good qualities, others find ideal uses for them.

Gel stains are forgiving, but they won't hide the sins of bad sanding marks, spots of filler or glue smudges. Contrary to popular belief, these combination finishes still need a clear topcoat in most circumstances. Different brands of gel stains also vary both in their handling characteristics and in their color rendition of the same named

stain (see p. 63). However, for those projects made of difficult, blotch-prone woods, such as cherry and pine, gel stains may be the best solution. Their ability to layer color makes them easy to use as glazes. For these reasons and others I will demonstrate, these small cans of thick color deserve a spot on everyone's shelf.

## Where gel stains prove their value

One of the strongest selling points of a gel stain is its ease of application. There is no need for a spray gun, a specialty brush or even a spotless shop—only a nice, soft cloth, such as an old T-shirt. Gel stains are all wipe-on/wipe-off products, which results in very little wet surface (tacky at most). A gel stain is not like a traditional thin pigment stain that never gets deeper in color no matter how many coats are applied. Rather, a gel stain builds up color with each application, so don't apply a

heavy first coat for a darker color. Simply apply a second one.

## Gel stains work well on blotch-prone woods

The end grain on tabletops and raised panels often absorbs regular stains in dark, ugly contrast to the straight grain around it. Likewise, some cherry and pine boards turn blotchy when a stain has been applied. One solution is to use a stain controller (see *FWW* #156, pp. 113-114), such as a thin coat of clear gel varnish or dewaxed shellac, but using a gel stain may negate the need for this step.

## Gel stains color in increments

Woodworkers often combine solid wood and plywood in the construction of cabinets. It is a common struggle to make these components blend together when it comes to staining them. A gel stain is an ideal solution for this problem. If one component is

## What puts the “gel” in gel stains?

The Bartley Collection Ltd. has been making gel stains and varnishes for 30 years. These products start life much the same as their liquid counterparts. A powdery thickening agent is added to the liquid mix of resins, pigments and mineral spirits. In a process known as thixotropy, 100-gal. batches are put in a machine resembling a large milkshake maker. As the ingredients are stirred for at least an hour, the chemicals react together and heat up to around 150°F. Once this temperature has been reached, the mixture must be canned quickly before it cools and becomes the thick mixture known as a gel stain.



**A tale of two stains.** The gel stain on the left imparts an even color over the whole piece of wood. The dye stain on the right creates a blotchy finish on the face grain and an ugly, dark end grain.



## WIPE ON, WIPE OFF



*One of the main appeals of gel stains is their ease of use. They can be applied to raw wood straight from the can using only a small rag. Apply the stain in a circular motion, working it into the wood. Avoid leaving large amounts of surplus gel on the wood. Before the gel has a chance to become tacky, wipe the surface with a clean rag, leaving only a thin layer of finish on the wood.*





## DEEPEN COLOR WITH ADDITIONAL COATS

Plywood and solid wood react differently to the same stain, resulting in uneven color. Gel stains build color in increments, so it's easy to match the colors.

lighter than the other, a second application on the lighter area pulls in the tones nicely.

Sapwood sometimes can be concealed by applications of gel stain on the light stripes. Usually two coats will successfully blend the light with the dark, but if necessary, you can alter the tone of the gel stain by adding concentrated pigment such as Japan colors or artist's colors.

**Gel stains are a nifty medium for glazing**—Start by applying a base stain either with a dye or a pigment stain. Seal this with a clear gel varnish or a thin coat of dewaxed shellac. Scuff-sand with 320- or 400-grit paper and then apply a thin glaze of gel stain. This imparts a small amount of tone to the wood without being heavy and creates a deeper look from the layers of color.

You also can use two different gel stains to match the color of another finished piece. To match a tabletop to its base, for instance, I used an initial coat of Clearwater stain, followed by an application of Bartley gel stain.

### Gel stains have a downside

For everything good about gel stains, there are a few drawbacks. Lack of clarity is certainly a common complaint. A gel stain on a figured wood, such as tiger or bird's-eye maple, is a crime. The resulting appearance is muted and lacks intensity. Even on straight-grained wood, application of multiple coats of gel stain risks muddying up the wood.

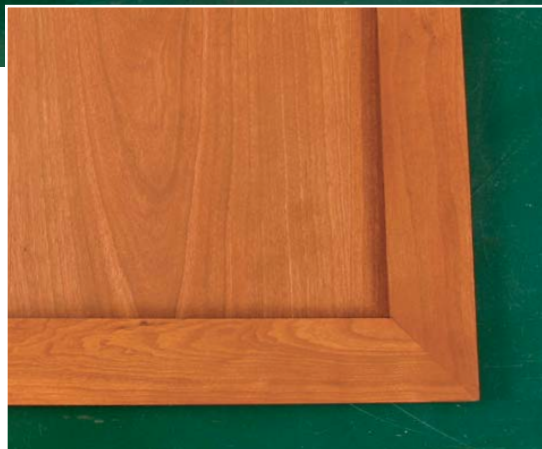
### Topcoats receive special consideration

Most gel stains remain on the surface—especially on hardwood—rather than penetrating the wood as dye stains do. Unless they are well protected with a durable topcoat, heavy-use areas such



**Another layer of color.** Gel stains increase the degree of color with each application. Two thin coats are better than one heavy one.

**A perfect match.** A second coat of stain on the hardwood frame leaves it looking as if it came from the same tree as the plywood panel.



as tabletops are at risk of the color wearing through. With the exception of Clearwater, topcoat options are limited with these gels. Bartley, Wood-Kote and Olympic all recommend a gel varnish or liquid polyurethane. Because gel varnish is actually gelled polyurethane, which is softer than its liquid counterparts, it is not a good choice for tabletops.

Care should be taken when topcoating oil-based gel stains with solvent-based lacquer. These stains have a resin binder that,

if left on too thick or still curing, may cause the lacquer to crinkle.

Gel stains can be the answer to challenging staining situations. For those unwilling to take chances with the unfamiliar world of dye stains, spraying stains, pre-stain conditioners, pre-sealing or pre-sizing, these gels will work beautifully as a one-step staining process. □

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## Many brands of gel stains, many shades of cherry

Gel stains are available in oil- and water-based forms. These stains come in the typical range of wood tones as well as in bright primary colors. For this article, I tested the cherry stain from various

manufacturers to show the wide range of tone and each stain's ability to grab the wood, or "take." I chose to illustrate it on cherry and pine boards, two blotch-prone woods.



### BARTLEY

Very rich in tone, one application alone imparts a deep color. This stain leans toward the reds that are good for traditional work such as reproductions. The label states that the product stains and seals in one step. However, a surface left at this stage is vulnerable and lacks sheen. It's best to topcoat with gel varnish or polyurethane.

### ON CHERRY



### ON PINE



### CLEARWATER

Because this product is a dye, it tends toward greater transparency than the other gels, which are pigments. Clearwater has no binder, so any topcoat can be used over it. However, if a water-based topcoat is used, pre-seal the gel stain with a thin dewaxed shellac to prevent color bleed-through.



### MINWAX

This stain is weak in color and light bodied; the tone is closest to unstained cherry. It must dry for 24 hours before a polyurethane topcoat can be applied.



### OLYMPIC

This oil-based interior/exterior antique cherry is the most orange colored of the five stains shown here because one of its ingredients is red iron oxide. The consistency in the can resembles thick latex paint, and more than two coats hides most grain. Topcoat with oil- or water-based polyurethane.



### WOOD-KOTE

This stain is heavily pigmented with an orange/brown tone. The colorant is so strong that it can "grab" the wood a bit too intensely. It is not as easy to wipe off as the other gels, and it also has a strong odor. After Wood-Kote dries in two hours, polyurethane or lacquer can be used as a topcoat.

